WHAT IS CLAIMED IS:

1. A composite dielectric material comprising a resin and a ceramic powder dispersed therein, wherein

said resin results from a polyvinylbenzyl ether compound,

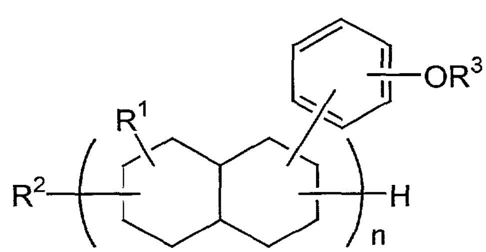
the content of the ceramic powder is from 10 vol% to less than 70 vol% based on the ceramic powder and the polyvinylbenzyl ether compound combined, and

said composite dielectric material has a Q of at least 250 and a dielectric constant of at least 3 at a frequency of at least 500 MHz.

2. The composite dielectric material of claim 1 which has been prepared by curing a mixture of the polyvinylbenzyl ether compound and the ceramic powder.

3. The composite dielectric material of claim 1 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

4. The composite dielectric material of claim 1 wherein the ceramic powder to be dispersed has a Q of 250 to 50,000 and a dielectric constant of 2.5 to 300 at a frequency of 1

to 15 GHz.

5. The composite dielectric material of claim 1 wherein the ceramic powder is at least one ceramic based on a composition selected from the group consisting of TiO_2, $CaTiO_3$, $SrTiO_3$, $BaO-Nd_2O_3-TiO_2$, $Bi_2O_3-BaO-Nd_2O_3-TiO_2$, $BaTi_4O_9$, $Ba_2Ti_9O_{20}$, $Ba_2(Ti,Sn)_9O_{20}$, $MgO-TiO_2$, $ZnO-TiO_2$, $MgO-SiO_2$, and Al_2O_3 base compositions.

6. A composite dielectric material comprising a resin and a ceramic powder dispersed therein, wherein

said resin results from a polyvinylbenzyl ether compound,

said ceramic powder is at least one ceramic based on a composition selected from the group consisting of $BaTiO_3$, $(Ba,Pb)TiO_3$, $Ba(Ti,Zr)O_3$, and $(Ba,Sr)TiO_3$ base compositions,

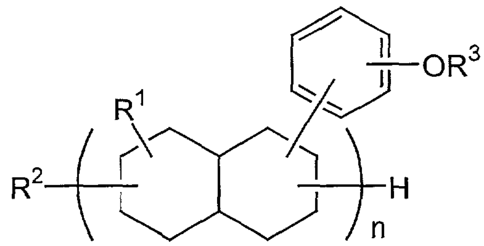
the content of the ceramic powder is from 30 vol% to less than 70 vol% based on the ceramic powder and the polyvinylbenzyl ether compound combined, and

said composite dielectric material has a dielectric constant of at least 10 in a high-frequency band of at least 10 MHz.

7. The composite dielectric material of claim 6 which has been prepared by curing a mixture of the polyvinylbenzyl ether compound and the ceramic powder.

8. The composite dielectric material of claim 6 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

9. The composite dielectric material of claim 6 wherein the ceramic powder to be dispersed has a dielectric constant of 90 to 100,000 at a frequency of 100 kHz to 10 MHz.

10. A composite dielectric substrate comprising a resin and a dielectric ceramic powder dispersed therein, wherein

said resin results from a polyvinylbenzyl ether compound,

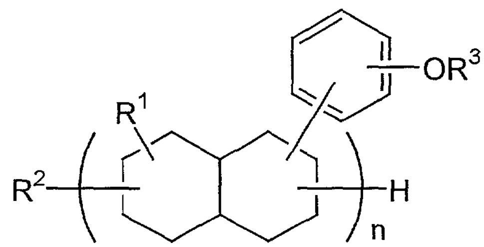
the content of the dielectric ceramic powder is from 10 to 65 vol% based on the dielectric ceramic powder and the polyvinylbenzyl ether compound combined, and

said composite dielectric substrate is used in a high-frequency region of at least 100 MHz.

11. The composite dielectric substrate of claim 10 which has been prepared by molding and curing a mixture of the polyvinylbenzyl ether compound and the ceramic powder.

12. The composite dielectric substrate of claim 10 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

13. The composite dielectric substrate of claim 10 wherein the dielectric ceramic powder has a mean particle size of 0.5 to 100 μm.

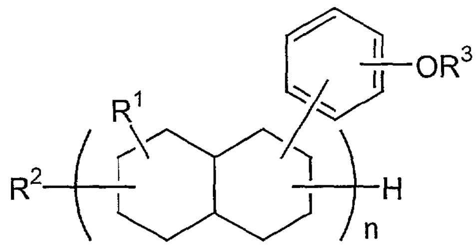
14. A prepreg which has been prepared by dispersing a polyvinylbenzyl ether compound and a dielectric ceramic powder in a solvent to form a slurry, applying the slurry to a cloth base, and drying, wherein

the content of the dielectric ceramic powder is from 10 to 65 vol% based on the dielectric ceramic powder and the polyvinylbenzyl ether compound combined.

15. The prepreg of claim 14 wherein the cloth base is glass cloth.

16. The prepreg of claim 14 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

17. The prepreg of claim 14 wherein the dielectric ceramic powder has a mean particle size of 0.5 to 100 μm.

18. A composite dielectric substrate which has been prepared by heating and compressing the prepreg of claim 14, the substrate being used in a high-frequency region of at least 100 MHz.

19. A double side metal-clad composite dielectric substrate which has been prepared by placing the prepreg of claim 14 between a pair of metal foils, followed by laminating press.

20. A double side metal-clad composite dielectric substrate which has been prepared by dispersing a polyvinylbenzyl ether compound and a dielectric ceramic powder in a solvent to form a slurry, applying the slurry onto a metal foil, drying the coating to form the coated metal foil, and placing a cloth base between a pair of the coated metal foils such that the coating is in contact with the cloth base, followed by laminating press, wherein

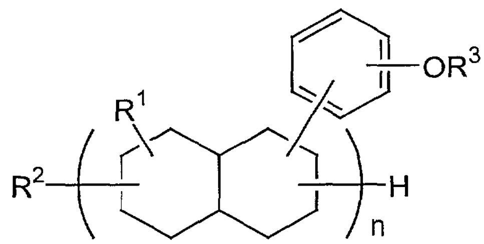
the content of the dielectric ceramic powder is from 10 to 65 vol% based on the dielectric ceramic powder and

the polyvinylbenzyl ether compound combined.

21. The substrate of claim 20 wherein the cloth base is glass cloth.

22. The substrate of claim 20 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

23. The substrate of claim 20 wherein the dielectric ceramic powder has a mean particle size of 0.5 to 100 μm.

24. A coated metal foil to be used in the composite dielectric substrate of claim 20.

25. The coated metal foil of claim 24 wherein the metal foil is copper foil.

26. A composite dielectric substrate which has been prepared by dispersing a polyvinylbenzyl ether compound and a dielectric ceramic powder in a solvent to form a slurry, followed by drying and compression, wherein

the content of the dielectric ceramic powder is from 10 to 65 vol% based on the dielectric ceramic powder and the polyvinylbenzyl ether compound combined, and

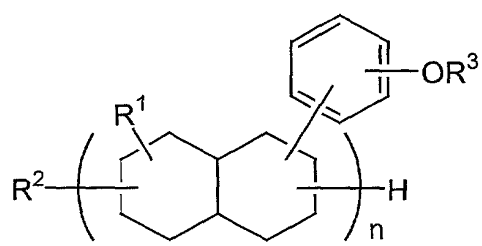
the composite dielectric substrate is used in a high-frequency region of at least 100 MHz.

27. A double side metal-clad composite dielectric substrate which has been prepared by dispersing a polyvinylbenzyl ether compound and a dielectric ceramic powder in a solvent to form a slurry, drying and molding the slurry into a molded sheet, and placing the molded sheet between a pair of metal foils, followed by laminating press, wherein

the content of the dielectric ceramic powder is from 10 to 65 vol% based on the dielectric ceramic powder and the polyvinylbenzyl ether compound combined.

28. The substrate of claim 26 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

29. The substrate of claim 26 wherein the dielectric ceramic powder has a mean particle size of 0.5 to 100 μm.

30. A molded sheet to be used in the composite dielectric substrate of claim 26.

31. The composite dielectric substrate of claim 19

wherein the metal foil is copper foil.

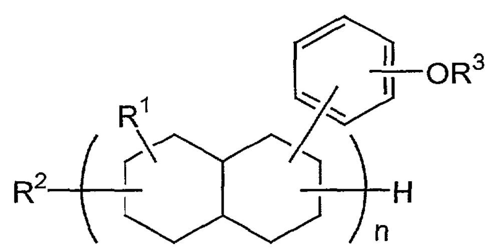
32. A composite dielectric substrate of multilayer construction which has been prepared by laminating press of the prepreg of claim 14, the coated metal foil of claim 24, the molded sheet of claim 30, or the composite dielectric substrate of claim 18.

33. The composite dielectric substrate of claim 19, for use in a high-frequency region of at least 100 MHz.

34. A composite magnetic substrate comprising a magnetic powder dispersed in a polyvinylbenzyl ether compound.

35. The composite magnetic substrate of claim 34 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

36. The composite magnetic substrate of claim 34 wherein the magnetic powder is of a ferromagnetic metal or ferrite.

37. The composite magnetic substrate of claim 34 wherein the magnetic powder has a mean particle size of 0.01 to 100 μm.

38. The composite magnetic substrate of claim 34 wherein the content of the magnetic powder is 50 to 90 wt% based on the magnetic powder and the polyvinylbenzyl ether compound combined.

39. A prepreg which has been prepared by dispersing a polyvinylbenzyl ether compound and a magnetic powder in a solvent to form a slurry, applying the slurry to a glass cloth, and drying.

40. A prepreg which has been prepared by dispersing a polyvinylbenzyl ether compound and a magnetic powder in a solvent to form a slurry, applying the slurry to a metal foil, and drying.

41. A substrate which has been prepared by laminating press the prepreg of claim 39.

42. A double side metal foil-clad substrate which has been prepared by placing metal foils on opposite surfaces of the prepreg of claim 39, followed by laminating press.

43. A double side metal foil-clad substrate which has been prepared by placing two plies of the prepreg of claim 40 on opposite surfaces of glass cloth such that the metal foils are positioned outside, followed by laminating press.

44. A prepreg which has been prepared by mixing a polyvinylbenzyl ether compound and a magnetic powder at a temperature of not lower than the melting point of the polyvinylbenzyl ether compound, and molding the resulting solid mixture under pressure.

45. A substrate which has been prepared by laminating press the prepreg of claim 44.

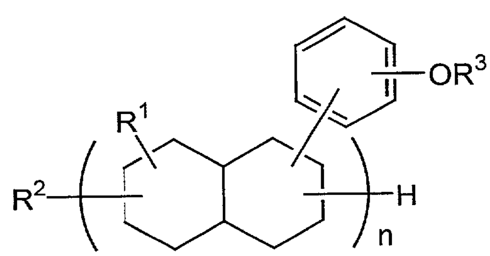
46. A double side metal foil-clad substrate which has been prepared by placing metal foils on opposite surfaces of the prepreg of claim 44, followed by laminating press.

47. A multilayer substrate which has been prepared by stacking at least two plies of the prepreg or substrate of claim 44, followed by laminating press.

48. A flame retardant substrate comprising a polyvinylbenzyl ether compound and a flame retardant dispersed therein.

49. The flame retardant substrate of claim 48 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

50. The flame retardant substrate of claim 48 wherein said flame retardant is a halogenated phosphate.

51. The flame retardant substrate of claim 48 wherein the content of the flame retardant is 40 to 60 wt% based on the flame retardant and the polyvinylbenzyl ether compound combined.

52. A prepreg which has been prepared by dispersing a polyvinylbenzyl ether compound and a flame retardant in a solvent to form a slurry, applying the slurry to a glass cloth, and drying.

53. A prepreg which has been prepared by dispersing a polyvinylbenzyl ether compound and a flame retardant in a solvent to form a slurry, applying the slurry to a metal foil, and drying.

54. A substrate which has been prepared by laminating press the prepreg of claim 52.

55. A double side metal foil-clad composite dielectric substrate which has been prepared by placing metal foils on opposite surfaces of the prepreg of claim 52, followed by laminating press.

56. A double side metal foil-clad substrate which has been prepared by placing two plies of the prepreg of claim 53 on opposite surfaces of glass cloth such that the metal foils are positioned outside, followed by laminating press.

57. A prepreg which has been prepared by mixing a polyvinylbenzyl ether compound and a flame retardant at a temperature of not lower than the melting point of the polyvinylbenzyl ether compound, and molding the resulting solid mixture under pressure.

58. A substrate which has been prepared by laminating press the prepreg of claim 57.

59. A double side metal foil-clad substrate which has been prepared by placing metal foils on opposite surfaces of the prepreg of claim 57, followed by laminating press.

60. A multilayer substrate which has been prepared by stacking at least two plies of the prepreg or substrate of claim 52, followed by laminating press.

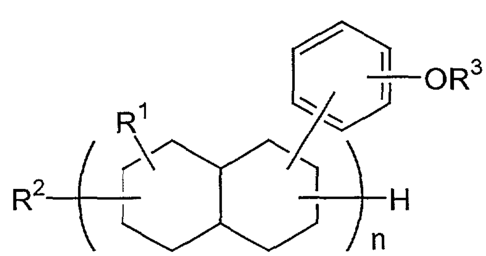
61. A flame retardant polyvinylbenzyl ether resin composition comprising a polyvinylbenzyl ether compound and an additive type flame retardant or a mixture of an additive type flame retardant and a flame retardant adjuvant.

62. The flame retardant polyvinylbenzyl ether resin composition of claim 61 wherein the additive type flame retardant is a brominated aromatic flame retardant which is present in an amount of 5 to 70% by weight based on the polyvinylbenzyl ether compound.

63. The flame retardant polyvinylbenzyl ether resin composition of claim 61 wherein the flame retardant adjuvant is an inorganic flame retardant, and a mixture of the brominated aromatic flame retardant and the inorganic flame retardant is present in an amount of 5 to 70% by weight based on the polyvinylbenzyl ether compound.

64. The flame retardant polyvinylbenzyl ether resin composition of claim 61 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes

hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

65. The flame retardant polyvinylbenzyl ether resin composition of claim 61 wherein the flame retardant adjuvant is an inorganic flame retardant which has been surface treated with a coupling agent.

66. A method for preparing a thermosetting polyvinylbenzyl ether resin composition, comprising the step of dissolving a polyvinylbenzyl ether compound in a solvent capable of dissolving the compound.

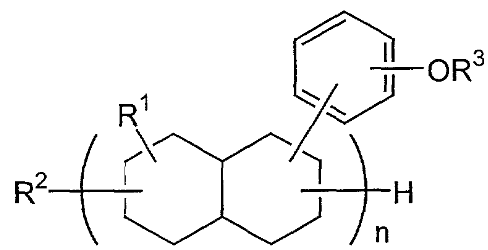
67. A method for preparing a thermosetting polyvinylbenzyl ether resin composition, comprising the steps of dissolving a polyvinylbenzyl ether compound in a solvent capable of dissolving the compound, removing the solvent from the polyvinylbenzyl ether compound, and obtaining a composition containing the thus treated polyvinylbenzyl ether compound.

68. The method of claim 66 wherein the composition cures into a product having a low dielectric dissipation factor.

69. The method of claim 66 wherein said solvent has a dielectric constant of 2 to 16.

70. The method of claim 66 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

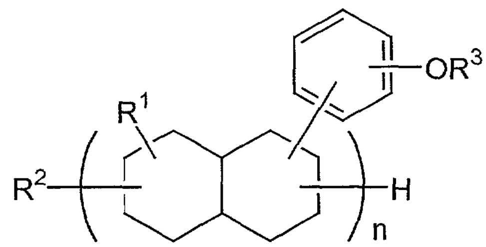
71. A thermosetting polyvinylbenzyl ether resin composition which is obtained by the method of claim 66 and cures into a product having a Q of at least 250 at a frequency of 2 GHz.

72. A thermosetting polyvinylbenzyl ether resin composition comprising a polyvinylbenzyl ether compound and a dielectric powder which has been surface treated with a coupling agent.

73. The composition of claim 72 wherein the coupling agent is an alkoxysilane or organic functional silane having a pyrolysis initiation temperature of at least 250°C.

74. The composition of claim 72 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

75. The composition of claim 72 wherein the dielectric powder has been surface treated with 0.1 to 6% by weight based on the dielectric powder of the coupling agent.

76. The composition of claim 72 further comprising a flame retardant.

77. A composite dielectric material which is obtained by curing the thermosetting polyvinylbenzyl ether resin composition of claim 72 whereby the dielectric powder is dispersed in a resin resulting from the polyvinylbenzyl ether compound.

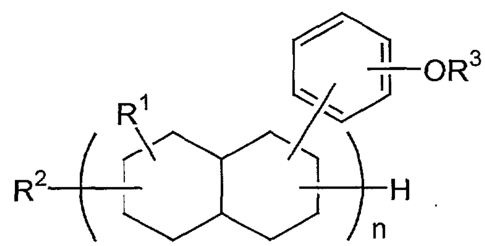
78. A composite dielectric material which is obtained by curing the thermosetting polyvinylbenzyl ether resin composition of claim 76 whereby the dielectric powder is dispersed in a resin resulting from the polyvinylbenzyl ether compound and the composite dielectric material is flame retarded.

79. An electronic part comprising an organic dielectric layer containing at least a polyvinylbenzyl ether compound, a composite magnetic layer having a magnetic powder

dispersed in a polyvinylbenzyl ether compound, or a composite dielectric layer having a dielectric powder dispersed in a polyvinylbenzyl ether compound.

80. The electronic part of claim 79 wherein the polyvinylbenzyl ether compound has the following formula (1):

(1)



wherein R^1 denotes methyl or ethyl, R^2 denotes hydrogen or a hydrocarbon group of 1 to 10 carbon atoms, R^3 denotes hydrogen or a vinylbenzyl group in a molar ratio of hydrogen to vinylbenzyl of from 60:40 to 0:100, and n is a number of 2 to 4.

81. The electronic part of claim 79 further comprising at least one layer containing at least reinforcing fibers.

82. The electronic part of claim 79 comprising at least one organic dielectric layer containing the polyvinylbenzyl ether compound and having a dielectric constant of 2.6 to 3.5 and a dielectric dissipation factor of 0.0025 to 0.005.

83. The electronic part of claim 79 comprising at least one first composite dielectric layer having a dielectric powder dispersed in a polyvinylbenzyl ether compound, said dielectric powder having a dielectric constant of 20 to 10,000 and a dielectric dissipation factor of 0.01 to 0.001, and said first composite dielectric layer having a dielectric constant of 5 to 20 and a dielectric dissipation factor of 0.0025 to 0.0075.

84. The electronic part of claim 79 comprising at least one second composite dielectric layer having a dielectric powder dispersed in a polyvinylbenzyl ether compound, said dielectric powder having a dielectric constant of 20 to 10,000 and a dielectric dissipation factor of 0.01 to 0.0001 and being present in an amount of 40 to 65 vol%, and said second composite dielectric layer having a dielectric constant of 10 to 40 and a dielectric dissipation factor of 0.0075 to 0.025.

85. The electronic part of claim 79 comprising at least one composite magnetic layer having a magnetic powder dispersed in a polyvinylbenzyl ether compound, said magnetic powder being present in an amount of 25 to 65 vol%, and said composite magnetic layer having a magnetic permeability of 3 to 20.

86. The electronic part of claim 79 wherein at least any one layer contains at least one flame retardant.